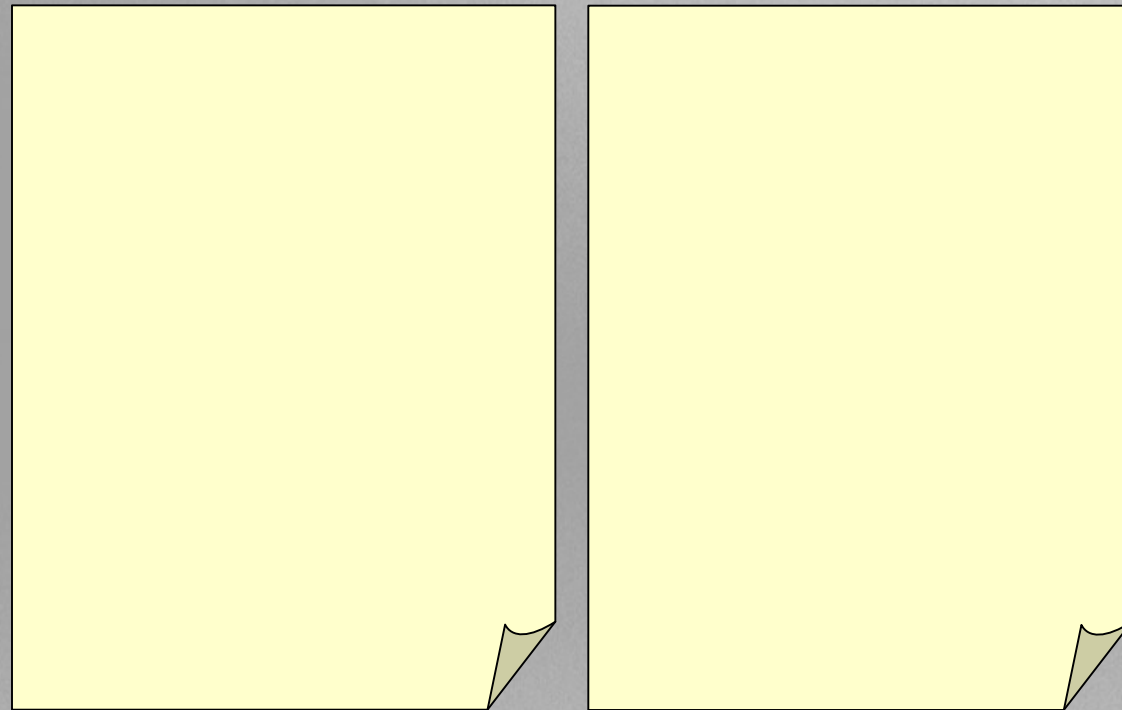




WICHITA STATE
UNIVERSITY

Challenge: come up with a design to keep a heavy book up about 5½” above a tabletop using two pieces of paper & some tape



Answer:

- Cut two pieces of paper into four half sheets
- Roll up three of them to make rigid “stringers” which carry the primary load
- Use last half sheet as a shell-like “skin” to keep the stringers evenly spaced (2.5”) apart
- Entire design weighs only about ½ ounce, but can carry about 100 pounds of load!

Manufacturing Tips:

- Need same height sheets (“tolerance” is small)
=> use paper cutter to cut all the sheets together
- Stringers have to be small in diameter => q-tip (what engineers call “tooling”) may help to tightly roll up paper stringers to small diameter
- Tape the rolled up stringer before attaching it (with tape) to the skin
- Leave ~1” length of skin so that it can overlap onto skin on other side

